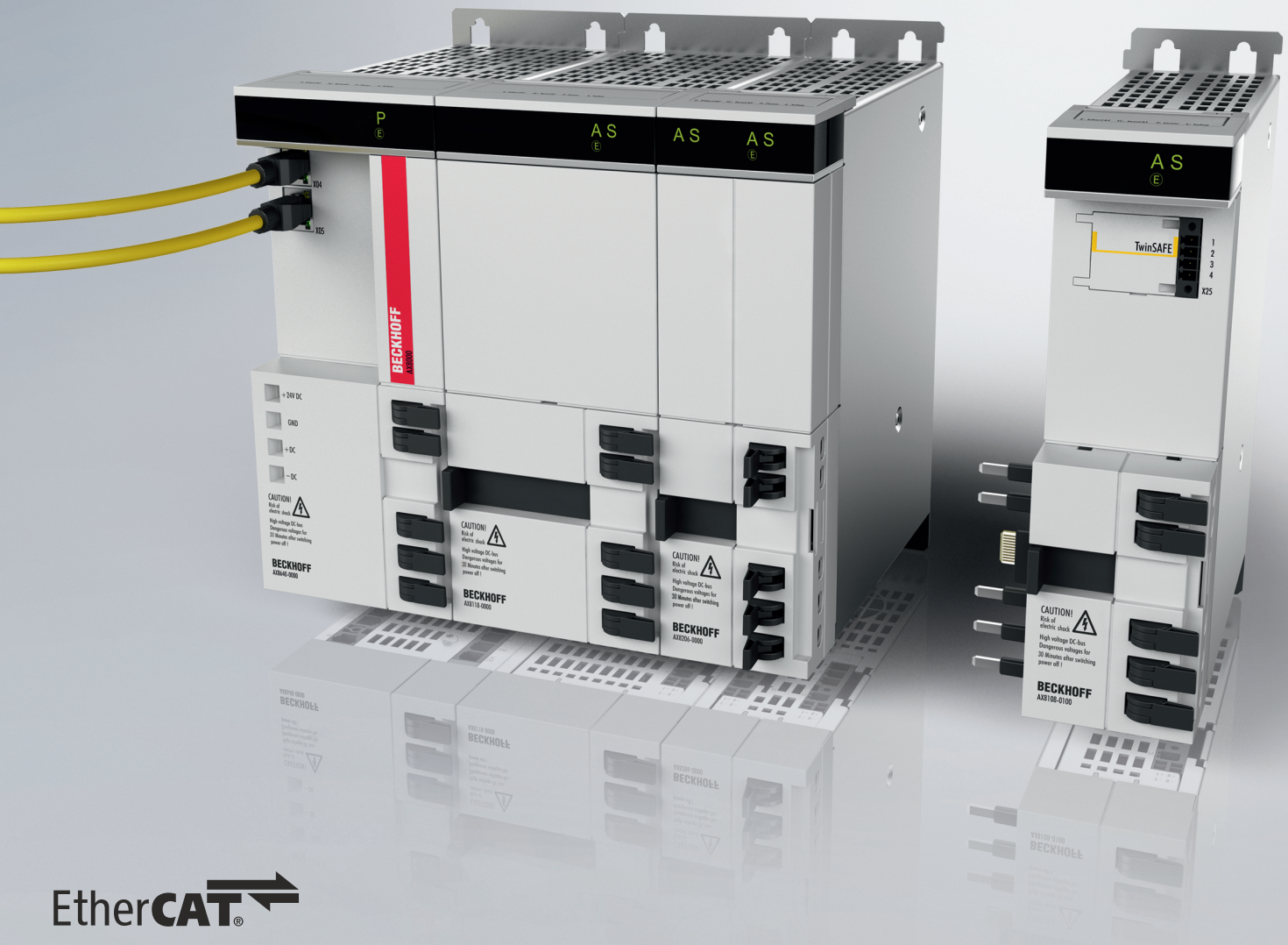
BECKHOFF

AX8xxx | Axis module

Diagnostic Messages | EN



EtherCAT®

1/23/2020 | Version: 1.3

Table of Contents

1 Standard-Messages

1.1 0000, No Error

This Message is thrown always, if the Device enters an error-free state.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
0000	0

Class	Type
Info	Information

Standard Reaction	Reset
No	Information: No reset required.

Possible Causes	Solutions
An Axis entered the error free state.	

1.2 5190, Test 5V supply failed

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
5190	20880

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	A reset is not possible. The drive detected a fatal hard- or software error.

Possible Causes	Solutions
There is an internal hardware error.	Send the AX8000 to the Beckhoff branch office that is responsible for you.

1.3 5580, Read failure EEPROM

Impossible to read Data from the Identity EEPROM of a Pcb. (no Response)
- ID 0: ControlPcb
- ID 1: FrontPcb
- ID 2: AdditionalAxisPcb
- ID 3: DisplayPcb
- ID 6: SafetyPcb
- ID 7: CpuPcb

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
5580	21888

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	A reset is not possible. The drive detected a fatal hard- or software error.

Possible Causes	Solutions
There is an internal hardware error.	Send the AX8000 to the Beckhoff branch office that is responsible for you.

1.4 5581, Checksum failure EEPROM

Checksum failure in read Data from the Identity EEPROM of a Pcb. (no Response)
- ID 0: ControlPcb
- ID 1: FrontPcb
- ID 2: AdditionalAxisPcb
- ID 3: DisplayPcb
- ID 6: SafetyPcb
- ID 7: CpuPcb

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
5581	21889

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	A reset is not possible. The drive detected a fatal hard- or software error.

Possible Causes	Solutions
There is an internal hardware error.	Send the AX8000 to the Beckhoff branch office that is responsible for you.

1.5 5582, EEPROM contains blank Data

The Identity EEPROM of a Pcb is blank. (no Response)
- ID 0: ControlPcb
- ID 1: FrontPcb
- ID 2: AdditionalAxisPcb
- ID 3: DisplayPcb
- ID 6: SafetyPcb
- ID 7: CpuPcb

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
5582	21890

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
This Message is generated instead of 0x5584, if you are using a debug Firmware or a special Prototype Hardware.	

1.6 5583, Unexpected EEPROM

The Identity EEPROM of a Pcb is unexpected. This Device shouldn't contain this Pcb.
- ID 0: ControlPcb
- ID 1: FrontPcb
- ID 2: AdditionalAxisPcb
- ID 3: DisplayPcb
- ID 6: SafetyPcb
- ID 7: CpuPcb

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
5583	21891

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
This Message is generated instead of 0x5585, if you are using a debug Firmware.	

1.7 5584, EEPROM contains blank Data

The Identity EEPROM of a Pcb is blank. (no Response)
- ID 0: ControlPcb
- ID 1: FrontPcb
- ID 2: AdditionalAxisPcb
- ID 3: DisplayPcb
- ID 6: SafetyPcb
- ID 7: CpuPcb

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
5584	21892

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	A reset is not possible. The drive detected a fatal hard- or software error.

Possible Causes	Solutions
There is an internal hardware error.	Send the AX8000 to the Beckhoff branch office that is responsible for you.

1.8 5585, Unexpected EEPROM

The Identity EEPROM of a Pcb is unexpected. This Device shouldn't contain this Pcb.
- ID 0: ControlPcb
- ID 1: FrontPcb
- ID 2: AdditionalAxisPcb
- ID 3: DisplayPcb
- ID 6: SafetyPcb
- ID 7: CpuPcb

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
5585	21893

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	A reset is not possible. The drive detected a fatal hard- or software error.

Possible Causes	Solutions
There is an internal hardware error.	Send the AX8000 to the Beckhoff branch office that is responsible for you.

1.9 5586, Restored Errormessages from persistent memory

The persistent Memory contains an errorlog. The messages are restored during power on phase.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
5586	21894

Class	Type
Info	Information

Standard Reaction	Reset
No	Information: No reset required.

1.10 5590, Detected incompatible Pcb

Detected incompatible Pcb for this Firmware.
- ID 0: ControlPcb
- ID 1: FrontPcb
- ID 2: AdditionalAxisPcb
- ID 3: DisplayPcb
- ID 6: SafetyPcb
- ID 7: CpuPcb

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
5590	21904

Class	Type
Error	Error

Standard Reaction	Reset
Torque off	A reset is not possible. The drive detected a fatal hard- or software error.

Possible Causes	Solutions
This Hardware is unsupported of this Firmware.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.
The HardwareRevision is unsupported.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.
The HardwareType is unknown.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

1.11 5591, Identity incompatible to a Pcb

Detected incompatible Pcb for this ESC EEPROM.
- ID 0: ControlPcb
- ID 1: FrontPcb
- ID 2: AdditionalAxisPcb
- ID 3: DisplayPcb
- ID 6: SafetyPcb
- ID 7: CpuPcb

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
5591	21905

Class	Type
Error	Error

Standard Reaction	Reset
Torque off	A reset is not possible. The drive detected a fatal hard- or software error.

Possible Causes	Solutions
You might have updated the ESC EEPROM with the wrong Identity.	Perform an EEPROM Update with the Systemmanager.

1.12 5592, FirmwareIndex is incompatible to this Firmware

Detected incompatible Pcb for this Firmware.
- ID 0: ControlPcb
- ID 1: FrontPcb
- ID 2: AdditionalAxisPcb
- ID 3: DisplayPcb
- ID 6: SafetyPcb
- ID 7: CpuPcb

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
5592	21906

Class	Type
Error	Error

Standard Reaction	Reset
Torque off	A reset is not possible. The drive detected a fatal hard- or software error.

Possible Causes	Solutions
This Hardware needs a newer Firmware.	Ask the Beckhoff branch office that is responsible for you for the right Firmwareversion.

1.13 5593, Structure Version is incompatible to this Firmware

Detected incompatible Pcb for this Firmware.
- ID 0: ControlPcb
- ID 1: FrontPcb
- ID 2: AdditionalAxisPcb
- ID 3: DisplayPcb
- ID 6: SafetyPcb
- ID 7: CpuPcb

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
5593	21907

Class	Type
Error	Error

Standard Reaction	Reset
Torque off	A reset is not possible. The drive detected a fatal hard- or software error.

Possible Causes	Solutions
This Hardware needs a newer Firmware.	Ask the Beckhoff branch office that is responsible for you for the right Firmwareversion.

1.14 5594, Simulating persistent data features.

If you see this Message, all persistent Data will start with zero Values on PowerOn.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
5594	21908

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
Persistent Memory is not supported in the early Hardware Versions.	

1.15 5596, Storing of persistent data failed.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
5596	21910

Class	Type
Error	Error

Standard Reaction	Reset
Nc handling	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
There is an internal hardware error.	Send the AX8000 to the Beckhoff branch office that is responsible for you.

1.16 5597, Unsupported prototype hardware.

The Firmware detected an unsupported prototype Hardware.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
5597	21911

Class	Type
Error	Error

Standard Reaction	Reset
Torque off	A reset is not possible. The drive detected a fatal hard- or software error.

Possible Causes	Solutions
The Hardware version (Object 0x1009) is below 01.00	Use a hardware version 01.00 or higher.

1.17 5598, Identity incompatible to Device

Detected incompatible device type for this ESC EEPROM.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
5598	21912

Class	Type
Error	Error

Standard Reaction	Reset
Torque off	A reset is not possible. The drive detected a fatal hard- or software error.

Possible Causes	Solutions
You might have updated the ESC EEPROM with the wrong Identity.	Perform an EEPROM Update with the Systemmanager.

1.18 5599, Identity incompatible to a Device

Detected incompatible device type for this ESC EEPROM.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
5599	21913

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
You might have updated the ESC EEPROM with the wrong Identity.	Perform an EEPROM Update with the Systemmanager.

1.19 6180, Internal Software Error Type A

Fatal Software Error.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
6180	24960

Class	Type
Error	Error

Standard Reaction	Reset
Open loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Fatal Software Exception Error.	Please switch the 24 V supply off and on again. If this happens again, contact the Beckhoff branch office that is responsible for you.

1.20 6181, Internal Software Error Type B

Fatal Software Error.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
6181	24961

Class	Type
Error	Error

Standard Reaction	Reset
Open loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Fatal Software Exception Error.	Please switch the 24 V supply off and on again. If this happens again, contact the Beckhoff branch office that is responsible for you.

1.21 6182, Internal Software Error Type C

Fatal Software Error.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
6182	24962

Class	Type
Error	Error

Standard Reaction	Reset
Open loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Fatal Software Exception Error.	Please switch the 24 V supply off and on again. If this happens again, contact the Beckhoff branch office that is responsible for you.

1.22 6190, Init Timeout

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
6190	24976

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The initialization process of this slot was working for a very long time.	Please check the Parameters of this module and try again.

1.23 6382, Illegal Slotconfiguration

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
6382	25474

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
A Slot which should contain a Module must be empty.	Please select a legal Module for this Slot..

1.24 6383, Illegal Slotconfiguration

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
6383	25475

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
A Feedback Module, which is only possible one time per Axis was selected as primary and secondary Encoder.	Please select another Feedback as primary or secondary Encoder.

1.25 6384, Illegal Slotconfiguration

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
6384	25476

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
A Slot which should be empty contains a Module.	Please remove the Module from this Slot..

1.26 8180, System restart or sync lost

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
8180	33152

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The Slave has received no ProcessData for more than one EtherCAT Cycle.	Check the realtime Tasks of your EtherCAT Master.

1.27 8181, Lost Distributed clocks Sync

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
8181	33153

Class	Type
Error	Communication error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The Software Sync PLL has left it's locked State.	TODO

1.28 A000, Transition Pre-Op to Safe-Op not successful

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
A000	40960

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The Parameters of the CoE Communication Objects do not fit the Sync Manager Parameters.	Please check, if you are working with the right EtherCAT Device Description XML-File.

1.29 A001, Transition Pre-Op to Safe-Op not successful

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
A001	40961

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The Parameters of the CoE Communication Objects do not fit the Sync Manager Parameters.	Please check, if you are working with the right EtherCAT Device Description XML-File.

1.30 A002, Transition Pre-Op to Safe-Op not successful

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
A002	40962

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The Parameters of the CoE Communication Objects do not fit the Sync Manager Parameters.	Please check, if you are working with the right EtherCAT Device Description XML-File.

1.31 A003, Transition Pre-Op to Safe-Op not successful

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
A003	40963

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The Parameters of the CoE Communication Objects do not fit the Sync Manager Parameters.	Please check, if you are working with the right EtherCAT Device Description XML-File.

1.32 A004, Sync Manager is disabled and has a Size unequal zero.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
A004	40964

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The Parameters of the CoE Communication Objects do not fit the Sync Manager Parameters.	Please check, if you are working with the right EtherCAT Device Description XML-File.

1.33 A005, Sync Manager Address is not multiple of 4.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
A005	40965

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The Sync Manager Startaddress is not a multiple of 4.	Configure the Startaddress to a multiple of 4. (32 Bit Alignment)

1.34 A00B, Dynamic Sync Manager Address is not multiple of 4.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
A00B	40971

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
The Sync Manager Startaddress is not a multiple of 4.	Configure the Startaddress to a multiple of 4. (32 Bit Alignment)

1.35 A00C, Dynamic Sync Manager Address Range overlap.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
A00C	40972

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
The Parameters of the CoE Communication Objects do not fit the Sync Manager Parameters.	Please check, if you are working with the right EtherCAT Device Description XML-File.

1.36 A00D, Dynamic Sync Manager Settings Error.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
A00D	40973

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
The Parameters of the CoE Communication Objects do not fit the Sync Manager Parameters.	Please check, if you are working with the right EtherCAT Device Description XML-File.

1.37 A00E, Dynamic Sync Manager Address Error.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
A00E	40974

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
The Parameters of the CoE Communication Objects do not fit the Sync Manager Parameters.	Please check, if you are working with the right EtherCAT Device Description XML-File.

1.38 A00F, Dynamic Sync Manager Length Error.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
A00F	40975

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
The Parameters of the CoE Communication Objects do not fit the Sync Manager Parameters.	Please check, if you are working with the right EtherCAT Device Description XML-File.

1.39 A010, SDO Complete Access Error: Object 0x%x/%x

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
A010	40976

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The complete access write to this parameter failed.	Please write your values with single access.

1.40 A011, Pdo Mapping Error: Unable to map Object (not possible).

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
A011	40977

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
A mapping Parameter is not supported of this Device.	Please check, your mapping Configuration.

1.41 A013, Pdo Mapping Error: Double Mapping of Object.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
A013	40979

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
A mapping Parameter is not supported of this Device.	Please check, your mapping Configuration.

1.42 A015, Pdo Mapping Error: Unable to map Object (no Mappings left).

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
A015	40981

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
A mapping Parameter is not supported of this Device.	Please check, your mapping Configuration.

1.43 A017, Pdo Mapping Error: Object has to be mapped always.

The Object has to be mapped always.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
A017	40983

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An object, which must be in the mapping is not mapped.	Please add a mapping to the mentioned object.

1.44 A019, Pdo Mapping Error: Object has to be mapped because of modes of operation.

Your actual requested Modes of Operation requires the mentioned Object in the Mapping.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
A019	40985

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
A mapping Parameter is not supported of this Device.	Please check, your mapping Configuration.

1.45 A01B, Pdo BitMapping Error: Object A is not next to Object B.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
A01B	40987

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
A mapping Parameter is not supported of this Device.	Please check, your mapping Configuration.

1.46 A01D, Pdo BitMapping Error: Can not Transform Bit-Mappings to Byte-Mappings.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
A01D	40989

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
A mapping Parameter is not supported of this Device.	Please check, your mapping Configuration.

1.47 A01F, Pdo Mapping Error: Invalid Oversampling Factor.

The oversampling factor of the mentioned Object is not possible.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
A01F	40991

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The Number of samples is higher than the Sync1/ Sync0 ratio.	Please check, your mapping Configuration.
Sync1/Sync0 ratio divided through the number of samples is not integer.	Please check, your mapping Configuration.

1.48 A021, Pdo Mapping Error: Oversampling is not allowed.

Oversampling is not allowed for the mentioned Object.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
A021	40993

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The mapping parameters contain oversampling for an object which doesn't support oversampling.	Please check, your mapping Configuration.

1.49 A023, Pdo Assignment Error

The Pdo Assignment List contains a Pdo which doesn't exist.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
A023	40995

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
You might have used a Debug XML-Description in your actual Project.	Please refresh your XML-Description and insert a new Instance of this Device in your Project.

1.50 A031, DynPdo Mapping Warning: Unable to map Object (not possible).

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
A031	41009

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
A mapping Parameter is not supported of this Device.	Please check, your mapping Configuration.

1.51 A033, DynPdo Mapping Warning: Double Mapping of Object.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
A033	41011

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
A mapping Parameter is not supported of this Device.	Please check, your mapping Configuration.

1.52 A035, DynPdo Mapping Warning: Unable to map Object (no Mappings left).

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
A035	41013

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
A mapping Parameter is not supported of this Device.	Please check, your mapping Configuration.

1.53 A037, DynPdo Mapping Warning: Object has to be mapped always.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
A037	41015

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
A mapping Parameter is not supported of this Device.	Please check, your mapping Configuration.

1.54 A039, DynPdo Mapping Warning: Object has to be mapped because of modes of operation.

Your actual requested Modes of Operation requires the mentioned Object in the Mapping.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
A039	41017

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
A mapping Parameter is not supported of this Device.	Please check, your mapping Configuration.

1.55 A03B, DynPdo BitMapping Warning: Object A is not next to Object B.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
A03B	41019

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
A mapping Parameter is not supported of this Device.	Please check, your mapping Configuration.

1.56 A03D, DynPdo BitMapping Warning: Can not Transform Bit-Mappings to Byte-Mappings.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
A03D	41021

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
A mapping Parameter is not supported of this Device.	Please check, your mapping Configuration.

1.57 A03F, DynPdo Mapping Warning: Invalid Oversampling Factor.

The oversampling factor of the mentioned Object is not possible.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
A03F	41023

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
The Number of samples is higher than the Sync1/ Sync0 ratio.	Please check, your mapping Configuration.
Sync1/Sync0 ratio divided through the number of samples is not integer.	Please check, your mapping Configuration.

1.58 A041, DynPdo Mapping Warning: Oversampling is not allowed.

Oversampling is not allowed for the mentioned Object.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
A041	41025

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
The mapping parameters contain oversampling for an object which doesn't support oversampling.	Please check, your mapping Configuration.

1.59 A043, DynPdo Assignment Warning

The Pdo Assignment List contains a Pdo which doesn't exist.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
A043	41027

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
You might have used a Debug XML-Description in your actual Project.	Please refresh your XML-Description and insert a new Instance of this Device in your Project.

1.60 A080, Safe-Op is not possible because the local TwinCAT Runtime is in ConfigMode.

You should only see this Message, if you are a AX Developer.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
A080	41088

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The internal TwinCAT Runtime is in ConfigMode.	

1.61 A081, Transition Pre-Op to Safe-Op not successful

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
A081	41089

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	A reset is not possible. The drive detected a fatal hard- or software error.

Possible Causes	Solutions
There is an internal hardware error.	Send the AX8000 to the Beckhoff branch office that is responsible for you.

1.62 A082, EtherCAT Slave Stack Error:

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
A082	41090

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

1.63 FFFD, Debug firmware

Debug firmware: Replace ASAP!

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
FFFD	65533

Class	Type
Info	Information

Standard Reaction	Reset
No	Information: No reset required.

1.64 FFFF, Internal Error

Internal Error

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
FFFF	65535

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

2 Diagmessages of module DeviceMain

2.1 3210, DC link overvoltage

DC link overvoltage because the brake power of the power supply module is too low.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
3210	12816

Class	Type
Error	Overvoltage error

Standard Reaction	Reset
Torque off	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Parameterization of the brake chopper from the power supply module is wrong.	Check the parameterization of the brake chopper from the power supply module.
The brake resistor from the power supply module is defective	Measure the current resistance of the brake resistor.
Wrong selection of the brake resistor from the power supply module.	Check the resistance of the brake resistor. Check the power of the brake resistor.

2.2 4380, Fan speed seems to be zero.

Fan speed seems to be zero.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
4380	17280

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
The velocity signal of the cooling fan is zero.	Please check the cooling fan.

2.3 5112, Supply undervoltage: supply +24V

Supply undervoltage: supply +24V

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
5112	20754

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The 24V Supply Voltage went under 18V.	Check your power supply.

2.4 5181, Power supply controlword

The power supply device is in an error state and sent a torque off order to the connected Axes.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
5181	20865

Class	Type
Error	Error

Standard Reaction	Reset
Torque off	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Something went wrong in the power supply device.	Please check the messages of the power supply device.

2.5 5182, Power supply controlword

The power supply device controlword contains a live counter which didn't increment for the maximum accepted timespan.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
5182	20866

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The Power supply status is not alive.	Please Check if the Power supply status is linked to the Supply Device and the Device is in EtherCAT OP state.

2.6 5183, Power supply controlword

The power supply device is in an error state and sent a NC handling order to the connected Axes.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
5183	20867

Class	Type
Error	Error

Standard Reaction	Reset
Nc handling	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Something went wrong in the power supply device.	Please check the messages of the power supply device.

2.7 5185, Power supply controlword

The power supply device is in an error state and sent a non-regenerative brake order to the connected Axes.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
5185	20869

Class	Type
Error	Error

Standard Reaction	Reset
Shorted coils brake	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Something went wrong in the power supply device.	Please check the messages of the power supply device.

2.8 5186, Power supply controlword

The power supply device is in an error state and sent a regenerative brake order to the connected Axes.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
5186	20870

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Something went wrong in the power supply device.	Please check the messages of the power supply device.

2.9 5192, Supply overvoltage: supply +24V

Supply overvoltage: supply +24V

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
5192	20882

Class	Type
Error	Control voltage error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The 24V Supply Voltage went over 40V.	Check your 24V supply voltage.

2.10 6320, Parameter error in Object 0x%x/%x

The mentioned parameter contains a not accepted value.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
6320	25376

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Something is wrong with the parameters in this object.	Please check the parameters of the mentioned object.

2.11 8780, Configured Sync1 Cycle Time is above Maximum

The configured Sync1 Cycle Time is above the maximum.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
8780	34688

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The Cycle Time of your NC-Task is above the supported maximum value of this drive.	Please set your Task to a shorter Cycle Time.

2.12 8781, Configured Sync1 Cycle Time is below Minimum

The configured Sync1 Cycle Time is below the minimum.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
8781	34689

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The Cycle Time of your NC-Task is below the supported minimum value of this drive.	Please set your Task to a longer Cycle Time.

2.13 8782, Configured Sync1 Cycle Time is not a multiple of the Sync0 Cycle Time

The configured Sync1 Cycle Time is not a multiple of the Sync0 Cycle Time.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
8782	34690

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The Cycle Time of your NC-Task has to be a multiple of the drives Sync0 Cycle Time.	Please set your Task to a valid Cycle Time.

2.14 8783, Configured Sync0 Cycle Time is not legal

The configured Sync1 Cycle Time is not the default Cycle Time.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
8783	34691

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

2.15 A017, Pdo Mapping Error: Object has to be mapped always.

The Object has to be mapped always.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
A017	40983

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An object, which must be in the mapping is not mapped.	Please add a mapping to the mentioned object.

2.16 FFFF, Internal Error

Internal Error

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
FFFF	65535

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

3 Diagmessages of module DeviceDebug

4 Diagmessages of module AxisMain

4.1 0000, No Error

This Message is thrown always, if the Device enters an error-free state.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
0000	0

Class	Type
Info	Information

Standard Reaction	Reset
No	Information: No reset required.

Possible Causes	Solutions
An Axis entered the error free state.	

4.2 2340, Short circuit (motor-side)

The drive hardware detected an over-current on the motor phases. The short circuit detection was triggered.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
2340	9024

Class	Type
Error	Overcurrent error

Standard Reaction	Reset
Torque off	A fatal error occurred. A device reboot is required.

Possible Causes	Solutions
Short circuit in the motor cable.	Check the motor cable
Short circuit in the motor winding.	Check the motor winding with an high voltage test or check the winding resistance.

4.3 2380, Continuous over current (device output side) Phase U

The drive software detected an overcurrent on the motor phases U.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
2380	9088

Class	Type
Error	Overcurrent error

Standard Reaction	Reset
Torque off	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Short circuit in the motor cable.	Check the motor cable
Short circuit in the motor winding.	Check the motor winding with an high voltage test or check the winding resistance.

4.4 2381, Continuous over current (device output side) Phase V

The drive software detected an overcurrent on the motor phases V.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
2381	9089

Class	Type
Error	Overcurrent error

Standard Reaction	Reset
Torque off	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Short circuit in the motor cable.	Check the motor cable
Short circuit in the motor winding.	Check the motor winding with an high voltage test or check the winding resistance.

4.5 2382, Continuous over current (device output side) Phase W

The drive software detected an overcurrent on the motor phases W.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
2382	9090

Class	Type
Error	Overcurrent error

Standard Reaction	Reset
Torque off	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Short circuit in the motor cable.	Check the motor cable
Short circuit in the motor winding.	Check the motor winding with an high voltage test or check the winding resistance.

4.6 2383, Phase U current offset out of range

The measured current offset of Phase U is outside the accepted range.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
2383	9091

Class	Type
Error	Error

Standard Reaction	Reset
Torque off	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

4.7 2384, Phase V current offset out of range

The measured current offset of Phase V is outside the accepted range.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
2384	9092

Class	Type
Error	Error

Standard Reaction	Reset
Torque off	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

4.8 2385, Phase W current offset out of range

The measured current offset of Phase W is outside the accepted range.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
2385	9093

Class	Type
Error	Error

Standard Reaction	Reset
Torque off	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

4.9 3180, Phase failure motor

The drive software detected an phase failure at the motor side. Please check wiring.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
3180	12672

Class	Type
Error	Motor connection error

Standard Reaction	Reset
Shorted coils brake	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
A power wire is not connected properly to the hybrid motor connector.	Check the power connections to the hybrid motor connector.
The hybrid motor connector seems not to be plugged in properly.	Check if the hybrid motor connector is plugged in properly.
A power wire in the motor cable is broken.	Check the power wires in the motor cable.

4.10 3220, DC link under-voltage

An under-voltage occurred in the DC link circuit.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
3220	12832

Class	Type
Error	Undervoltage error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The DC link voltage level was under the configured minimum.	Check the minimum DC link voltage parameter. (Object 0x2C02/1)

4.11 3280, DC link is not ready

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
3280	12928

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The Axis got an enable command before DC link was ready.	Check your power supply device.

4.12 4310, Drive overtemperature shut down

The drive temperature has reached a critical value.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
4310	17168

Class	Type
Error	Drive overtemperature shut down

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The ambient temperature is too high	Cool down the ambient temperature
The fan is defective	Check the fan
Internal brake power and power loss of axis are too high	Lower the brake power and power loss of axis
The cooling slots or the measuring sensors are polluted	Clean the cooling slots and the measuring sensors

4.13 5180, Output stage STO active.

The Axis is unable to operate, because the Amplifier is locked from the safety module. (Safe Torque Off / STO)

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
5180	20864

Class	Type
Error	Safety STO error

Standard Reaction	Reset
Torque off	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The amplifier is locked by the safety module.	Check the status of the safety module.

4.14 5184, Supply DC link circuit is not ready

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
5184	20868

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The Power supply device is not ready.	Please Check the Messages and the Status of the Supply Device.

4.15 5187, Power supply communication is not established

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
5187	20871

Class	Type
Error	Error

Standard Reaction	Reset
Torque off	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The Power supply status is not alive.	Please Check if the Power supply controlword of this Axis Device is linked to the Power Supply Device and the Device is in EtherCAT OP.
The Power supply SDO communications are not finished.	Please Check if the Power supply communication parameters and status of DeviceMain.

4.16 5441, Positive limit switch active

Positive limit switch reached

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
5441	21569

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The axis has been moved to the positive limit switch.	Please move the axis away from the positive limit switch.

4.17 5442, Negative limit switch active

Negative limit switch reached

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
5442	21570

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The axis has been moved to the negative limit switch.	Please move the axis away from the negative limit switch.

4.18 5443, Loss of the hardware enable

The configured hardware enable input has been deactivated by an external event, even though the AX8000 was under control.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
5443	21571

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Problems with the digital inputs	Check the digital inputs

4.19 5444, Loss of the hardware enable (Reaction TorqueOff)

The configured hardware enable input has been deactivated by an external event, even though the AX8000 was under control.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
5444	21572

Class	Type
Error	Error

Standard Reaction	Reset
Torque off	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Problems with the digital inputs	Check the digital inputs

4.20 5595, Modulo remainder will not be stored.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
5595	21909

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
Persistent memory is not present.	

4.21 6183, Internal Watchdog Error

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
6183	24963

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
To much objects in the PDO-mapping.	Check the number of objects in the PDO-mapping.
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

4.22 638A, The Axis seems not to be parameterized.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
638A	25482

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The Object 'AxisMain parameters/Configured drive type' was not set.	Write your drive type into 'AxisMain parameters/ Configured drive type'.

4.23 6390, Factor Group Parameters: Feed constant illegal feed

The actual combination of the factor group Parameters is not allowed for this Device.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
6390	25488

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The feed constant - feed contains an illegal value (Object 0x6092/1 ChA or 0x6892/1 ChB).	Please use a 2^x value (x from 16 to 28) for rotary encoders and a 10^x value (x from 0 to 9) for linear encoders.

4.24 6391, Factor Group Parameters: Feed constant illegal shaft revolutions

The actual combination of the factor group Parameters is not allowed for this Device.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
6391	25489

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The feed constant - shaft revolutions contains an illegal value (Object 0x6092/2 ChA or 0x6892/2 ChB).	Please set value to '1'.

4.25 6392, Factor Group Parameters: Gear ratio illegal Motor shaft revolutions

The actual combination of the factor group Parameters is not allowed for this Device.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
6392	25490

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The gear ratio - motor shaft revolutions contains an illegal value (Object 0x6091/1 ChA or 0x6891/1 ChB).	You might add the default value here.

4.26 6393, Factor Group Parameters: Gear ratio illegal Driving shaft revolutions

The actual combination of the factor group Parameters is not allowed for this Device.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
6393	25491

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The gear ratio - driving shaft revolutions contains an illegal value (Object 0x6091/2 ChA or 0x6891/2 ChB).	You might add the default value here.

4.27 6394, Factor Group Parameters: Position encoder resolution illegal encoder increments

The actual combination of the factor group Parameters is not allowed for this Device.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
6394	25492

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The position encoder resolution - encoder increments contains an illegal value (Object 0x608F/1 ChA or 0x688F/1 ChB).	Please compare it to your encoder values.

4.28 6395, Factor Group Parameters: Position encoder resolution illegal motor revolutions

The actual combination of the factor group Parameters is not allowed for this Device.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
6395	25493

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The position encoder resolution - motor revolutions contains an illegal value (Object 0x608F/2 ChA or 0x688F/2 ChB).	Please compare it to your encoder values.

4.29 6396, additional Factor Group Parameters: Feed constant illegal feed

The actual combination of the factor group Parameters is not allowed for this Device.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
6396	25494

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The additional feed constant - feed contains an illegal value (Object 0x60E9/1 ChA or 0x68E9/1 ChB).	Please use a 2^x value (x from 16 to 28) for rotary encoders and a 10^x value (x from 0 to 9) for linear encoders.

4.30 6397, additional Factor Group Parameters: Feed constant illegal shaft revolutions

The actual combination of the factor group Parameters is not allowed for this Device.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
6397	25495

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The additional feed constant - shaft revolutions contains an illegal value (Object 0x60EE/1 ChA or 0x68EE/1 ChB).	Please set value to '1'.

4.31 6398, additional Factor Group Parameters: Gear ratio illegal Motor shaft revolutions

The actual combination of the factor group Parameters is not allowed for this Device.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
6398	25496

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The additional gear ratio - motor shaft revolutions contains an illegal value (Object 0x60E8/1 ChA or 0x68E8/1 ChB).	You might add the default value here.

4.32 6399, additional Factor Group Parameters: Gear ratio illegal Driving shaft revolutions

The actual combination of the factor group Parameters is not allowed for this Device.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
6399	25497

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The additional gear ratio - driving shaft revolutions contains an illegal value (Object 0x60ED/1 ChA or 0x68ED/1 ChB).	You might add the default value here.

4.33 639A, additional Factor Group Parameters: Position encoder resolution illegal encoder increments

The actual combination of the factor group Parameters is not allowed for this Device.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
639A	25498

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The additional position encoder resolution - encoder increments contains an illegal value (Object 0x60E6/1 ChA or 0x68E6/1 ChB).	Please compare it to your encoder values.

4.34 639B, additional Factor Group Parameters: Position encoder resolution illegal motor revolutions

The actual combination of the factor group Parameters is not allowed for this Device.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
639B	25499

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The additional position encoder resolution - motor revolutions contains an illegal value (Object 0x60EB/1 ChA or 0x68EB/1 ChB).	Please compare it to your encoder values.

4.35 639C, Velocity factor illegal

The actual combination of the factor group Parameters is not allowed for this Device.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
639C	25500

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The velocity factor (Object 0x6096 ChA or 0x6896 ChB) does not adjust the velocity scaling to 0.1 mRPM in case of rotary Motors and 0.1 um/s in case of linear encoder.	Please change your setting to the suggested value.

4.36 639D, Acceleration factor illegal

The actual combination of the factor group Parameters is not allowed for this Device.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
639D	25501

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The acceleration factor (Object 0x6097 ChA or 0x6897 ChB) does not adjust the velocity scaling to 1 degree/s^2 in case of rotary Motors and 1 um/s^2 in case of linear encoder.	Please change your setting to the suggested value.

4.37 639E, Scaling index object 0x%x does not fit the Factor group parameters for the first Encoder

The actual combination of the factor group Parameters is not allowed for this Device.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
639E	25502

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The mentioned scaling index object doesn't represent the factor group settings of the first encoder.	Please compare the selected scaling to your factor group settings.

4.38 639F, Scaling index object 0x%x does not fit the Factor group parameters for the second Encoder

The actual combination of the factor group Parameters is not allowed for this Device.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
639F	25503

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The mentioned scaling index object doesn't represent the factor group settings of the second encoder.	Please compare the selected scaling to your additional factor group settings.

4.39 63A0, Motor or Primary Feedback changed

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
63A0	25504

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Extended Reset-Command (Fault reset with 'Unlock extended fault reset' Parameter).

4.40 63A1, Secondary Feedback changed

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
63A1	25505

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Extended Reset-Command (Fault reset with 'Unlock extended fault reset' Parameter).

4.41 63A2, Offset position actual value: No position offset existing in source 'encoder memory'

There is no primary position offset stored, for the selected source 'encoder memory'.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
63A2	25506

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
A position offset should used in the position control loop, but no position offset has been saved.	Calibrate the axis and save the new position offset.

4.42 63A3, Offset additional position actual value: No position offset existing in source 'encoder memory'

There is no secondary position offset stored, for the selected source 'encoder memory'.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
63A3	25507

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
A position offset should used in the position control loop, but no position offset has been saved.	Calibrate the axis and save the new position offset.

4.43 63A4, Offset position actual value: No position offset existing in source 'drive memory'

There is no primary position offset stored, for the selected source 'drive memory'.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
63A4	25508

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
A position offset should used in the position control loop, but no position offset has been saved.	Calibrate the axis and save the new position offset.

4.44 63A5, Offset additional position actual value: No position offset existing in source 'drive memory'

There is no secondary position offset stored, for the selected source 'drive memory'.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
63A5	25509

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
A position offset should used in the position control loop, but no position offset has been saved.	Calibrate the axis and save the new position offset.

4.45 63A6, Jerk factor illegal

The actual combination of the factor group Parameters is not allowed for this Device.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
63A6	25510

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The jerk factor (Object 0x60A2 ChA or 0x68A2 ChB) does not adjust the velocity scaling to 100 degree/s^2 in case of rotary Motors and 100 um/s^2 in case of linear encoder.	Please change your setting to the suggested value.

4.46 63A7, The range %u of the Position range limit is below the minimum accepted value of %u.

The range of the Position range limit (Object 0x6096 ChA or 0x6896 ChB) is below the minimum accepted value. The Range is calculated 'max limit' - 'min limit' + 1 and has to be positive.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
63A7	25511

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The range of the Position range limit (Object 0x6096 ChA or 0x6896 ChB) is below the minimum accepted value. The Range is calculated 'max limit' - 'min limit' + 1 and has to be positive.	Please check the min and max value of the position range limit.

4.47 63A8, Position range limit Inc with remainder is not supported for primary feedback.

The position range limit is scaled internally to encoder increments. This calculation result contains a remainder, which is not supported for the primary feedback.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
63A8	25512

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The position range limit is scaled internally to encoder increments. This calculation result contains a remainder, which is not supported for the primary feedback.	Please check the position range limit and the factor group parameters of this feedback.

4.48 63A9, Position range limit Inc with remainder is not supported for secondary feedback.

The position range limit is scaled internally to encoder increments. This calculation result contains a remainder, which is not supported for the secondary feedback.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
63A9	25513

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The position range limit is scaled internally to encoder increments. This calculation result contains a remainder, which is not supported for the secondary feedback.	Please check the position range limit and the factor group parameters of this feedback.

4.49 63AA, Object 0x%X/%X changed in EtherCAT SafeOP or OP.

This errormessage was created, because this change during Runtime is potentially dangerous, if you don't know what you do.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
63AA	25514

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The value of the position range limit or a Factor group object was changed in EtherCAT SafeOP or OP.	Execute fault reset command.

4.50 7180, Motor brake: Current monitoring error.

The motor brake current monitoring detected an insufficient current.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7180	29056

Class	Type
Error	Motor Brake connection error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
You have configured a motor brake and the motor brake current fell below the motor brake current monitoring level.	Check your motor brake connection (wires and connectors). Check the parameter 'motor brake current monitoring level' Object 0x3000/5 (Ch A) or Object 0x3400/5 (Ch B).

4.51 7380, Current sensor motor phase U

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7380	29568

Class	Type
Error	Error

Standard Reaction	Reset
Open loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

4.52 7381, Current sensor motor phase V

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7381	29569

Class	Type
Error	Error

Standard Reaction	Reset
Open loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

4.53 7382, Current sensor motor phase W

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7382	29570

Class	Type
Error	Error

Standard Reaction	Reset
Open loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

4.54 8182, EtherCAT Statemachine shutdown with enabled Axis

The EtherCAT Statemachine received a shutdown command, while the Axis was enabled.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
8182	33154

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The EtherCAT Statemachine received a shutdown command, while the Axis was enabled.	Please disable your Axes before Restart or Shutdown your EtherCAT Master.

4.55 8183, Controlword output cycle counter monitoring

The output cycle counter of the controlword didn't increment for at least two cycles and the monitoring function is activated.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
8183	33155

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The Output cycle counter monitoring is enabled and detected an error.	Check if the output cycle counter function is enabled in your NC. Check your EtherCAT realtime status.

4.56 8184, Dynoutput cycle counter monitoring

The dynoutput cycle counter of the controlword didn't increment for at least two cycles and the monitoring function is activated.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
8184	33156

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The Output cycle counter monitoring is enabled and detected an error.	Check if the output cycle counter function is enabled in your NC. Check your EtherCAT realtime status.

4.57 8185, Axis needs an extended fault reset command

The Axis received a fault reset command but needs an extended fault reset command

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
8185	33157

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The Axis received a fault reset command but needs an extended fault reset command	To leave the fault state try an extended fault reset command

4.58 8A80, Illegal Modes Of Operation

The modes of operation was set to an illegal value.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
8A80	35456

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The modes of operation was set to an illegal value.	Please check the value of Object 0x6060 (Ch A) or Object 0x6860 (Ch B).

4.59 8A81, Illegal Modes Of Operation change

The modes of operation was changed in an illegal transition while the axis was enabled.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
8A81	35457

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The modes of operation was changed in an illegal transition while the axis was enabled.	Please check the write operations to Object 0x6060 (Ch A) or Object 0x6860 (Ch B).

4.60 A017, Pdo Mapping Error: Object has to be mapped always.

The Object has to be mapped always.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
A017	40983

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An object, which must be in the mapping is not mapped.	Please add a mapping to the mentioned object.

4.61 FF01, Init Timeout

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
FF01	65281

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

4.62 FF07, Error reaction forced: Torque Off

The error reaction "torque off" has been triggered and executed with the Object 0x3004 (Ch A) or Object 0x3404 (Ch B).

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
FF07	65287

Class	Type
Error	Error

Standard Reaction	Reset
Torque off	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Standard reactions to errors can be tested with the Object 0x3004 (Ch A) or Object 0x3404 (Ch B). The resulting diagnostic message is exclusively a reminder that there is actually no error.	This diagnostic message requires no remedial action.

4.63 FF08, Error reaction forced: Shorted Coils Brake

The error reaction "Shorted coils brake" has been triggered and executed with the Object 0x3004 (Ch A) or Object 0x3404 (Ch B).

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
FF08	65288

Class	Type
Error	Error

Standard Reaction	Reset
Shorted coils brake	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Standard reactions to errors can be tested with the Object 0x3004 (Ch A) or Object 0x3404 (Ch B). The resulting diagnostic message is exclusively a reminder that there is actually no error.	This diagnostic message requires no remedial action.

4.64 FF09, Error reaction forced: Open Loop Ramp

The error reaction "Open loop ramp" has been triggered and executed with the Object 0x3004 (Ch A) or Object 0x3404 (Ch B).

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
FF09	65289

Class	Type
Error	Error

Standard Reaction	Reset
Open loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Standard reactions to errors can be tested with the Object 0x3004 (Ch A) or Object 0x3404 (Ch B). The resulting diagnostic message is exclusively a reminder that there is actually no error.	This diagnostic message requires no remedial action.

4.65 FF0A, Error reaction forced: Closed Loop Ramp

The error reaction "Closed loop ramp" has been triggered and executed with the Object 0x3004 (Ch A) or Object 0x3404 (Ch B).

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
FF0A	65290

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Standard reactions to errors can be tested with the Object 0x3004 (Ch A) or Object 0x3404 (Ch B). The resulting diagnostic message is exclusively a reminder that there is actually no error.	This diagnostic message requires no remedial action.

4.66 FF0B, Error reaction forced: NC handling

The error reaction "NC-Handling" has been triggered and executed with the Object 0x3004 (Ch A) or Object 0x3404 (Ch B).

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
FF0B	65291

Class	Type
Error	Error

Standard Reaction	Reset
Nc handling	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Standard reactions to errors can be tested with the Object 0x3004 (Ch A) or Object 0x3404 (Ch B). The resulting diagnostic message is exclusively a reminder that there is actually no error.	This diagnostic message requires no remedial action.

4.67 FF0C, Error reaction TorqueOff with emergency brake

The Axis performed a torque off Errorreaction with an emergency brake.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
FF0C	65292

Class	Type
Info	TorqueOff with emergency brake

Standard Reaction	Reset
No	Information: No reset required.

4.68 FFFF, Internal Error

Internal Error

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
FFFF	65535

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

5 Diagmessages of module Interpolator

5.1 6386, Parameter Interpolator: Illegal NC-Task cycle time

Parameter Interpolator: To low NC-Task cycle time for this interpolation sub mode select. The feed forward control may not work as expected.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
6386	25478

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
Parameter Interpolator: To low NC-Task cycle time for this interpolation sub mode select.	Adjust NC-Task cycle time.

5.2 8680, Position Demand Value outside of the specified Position Range Limits

Position Demand Value outside of the specified Position Range Limits

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
8680	34432

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Parameter Interpolator: To low NC-Task cycle time for this interpolation sub mode select.	Adjust NC-Task cycle time.

5.3 A01A, TxPdo Mapping Error: Object 0x%x/%x has to be mapped for modes of operation %d.

TxPdo Mapping Error: Object 0x%x/%x has to be mapped for modes of operation %d.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
A01A	40986

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
A necessary process data for this mode of operation is not mapped	Add the necessary process data for this mode of operation

5.4 FFFF, Internal Error

Internal Error

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
FFFF	65535

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

6 Diagmessages of module PositionControl

6.1 8611, Following error

The servo drive has detected a following error.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
8611	34321

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The following error has exceeded the maximum value.	Analyze your application and increase the maximum value of Object 6065 or 6066, if appropriate.
The set value dynamic characteristics are set too "hard".	Analyze your application and check whether it is theoretically possible to achieve the specified dynamics.
An error has occurred in the set value generation.	Analyze the cause (NC, internal set value generation, etc.). If no solution can be found, contact support.
The current limit has been reached.	Analyze the motor parametrization or your calculation and check whether the motor can theoretically follow the set values.
The mechanical system is too sluggish.	Analyze your application and try make the mechanical system smoother.
The speed limit has been reached.	Analyze the motor parametrization or your calculation and check the maximum motor speed value used in the calculation.

6.2 FFFF, Internal Error

Internal Error

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
FFFF	65535

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

7 Diagmessages of module VelocityControl

7.1 3183, The bipolar velocity limit is higher than 1/4 of position range limit per EtherCAT Sync1 cycle.

The maximum accepted position step per cycle is 1/4 of the position range limit range. This error occurs, if the resulting velocity is lower than the bipolar velocity limit.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
3183	12675

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The maximum accepted position step per cycle is 1/4 of the position range limit range. This error occurs, if the resulting velocity is lower than the bipolar velocity limit.	Raise your position range limit or lower your bipolar velocity limit.

7.2 7186, Detected moving axis on enable transition.

The Axis was moving in the disabled State and was now stopped during the enable transition.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7186	29062

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The Axis was moving in the disabled State and was now stopped during the enable transition.	Enable Axis only, if it is not moving.

7.3 8480, Overspeed error

The speed of the axis is higher than the parameterized maximum value in the Velocity error tolerance Object

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
8480	33920

Class	Type
Error	Overspeed error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The speed of the axis is higher than the parameterized maximum value in the Velocity error tolerance Object	Raise the velocity error tolerance or reduce your target velocity.

7.4 FFFF, Internal Error

Internal Error

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
FFFF	65535

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

8 Diagmessages of module BiquadFilter

8.1 6320, Parameter error in object 0x%x/%x

The mentioned parameter contains a not accepted value.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
6320	25376

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Something is wrong with the parameters in this object.	Please check the parameters of the mentioned object.

8.2 63AB, The filter parameterization is not valid

The parameterization of the filter is not valid

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
63AB	25515

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The parameterization of the filter is not valid	Please check the parameters of the filter.

8.3 FFFF, Internal Error

Internal Error

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
FFFF	65535

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

9 Diagmessages of module TorqueControl

9.1 2330, Earth leakage (motor-side)

The Iuvw sum Monitoring detected an Error.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
2330	9008

Class	Type
Error	Motor connection error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Iuvw sum (0x3242/14) raised above the parameter Iuvw sum max (0x3243/07)	Please check the Motor connection and validate the parameter value.

9.2 3181, Phase frequency (motor-side) raised above 600 Hz

Phase frequency (motor-side) raised above 600 Hz and you have a dual use limited device.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
3181	12673

Class	Type
Error	Overspeed error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Phase frequency (motor-side) raised above 600 Hz and you have a dual use limited device.	Reduce your target velocity.

9.3 3182, Velocity actual Value raised above the max channel accepted velocity

Velocity actual Value raised above the max channel accepted velocity

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
3182	12674

Class	Type
Error	Overspeed error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Velocity actual Value raised above the max channel accepted velocity	Reduce your target velocity.

9.4 6320, Parameter error in object 0x%x/%x

The mentioned parameter contains a not accepted value.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
6320	25376

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Something is wrong with the parameters in this object.	Please check the parameters of the mentioned object.

9.5 6388, Parameter Torque Control: The value in object 0x%x/%x is higher then the motor peak current (0x%x/%x).

The rated current is higher then the motor peak current.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
6388	25480

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Something is wrong with the parameters in this object.	Please check the parameters of the mentioned object.

9.6 6389, Parameter Torque Control: The value in object 0x %x/%x is higher then the configured peak current (0x %x/%x).

The rated current is higher then the channel peak current.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
6389	25481

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Something is wrong with the parameters in this object.	Please check the parameters of the mentioned object.

9.7 638F, Parameter Torque Control: The value in Object 0x%x/%x is higher then the Motor maximum voltage slope (0x%x/%x).

The voltage slope of the parametrized motor is not valid for this drive

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
638F	25487

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Something is wrong with the parameters in this object.	Please check the parameters of the mentioned object.

9.8 FFFF, Internal Error

Internal Error

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
FFFF	65535

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

10 Diagmessages of module OCT rotary (Hiperface DSL)

10.1 7320, HpfDsl: Encoder error (position invalid)

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7320	29472

Class	Type
Error	Feedback error

Standard Reaction	Reset
Shorted coils brake	Execute Reset-Command (Fault reset).

10.2 7380, HpfDsl: Encoder start sequence failed

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7380	29568

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

10.3 7381, HpfDsl: Encoder shutdown failed

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7381	29569

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

10.4 7382, HpfDsl: Parameter access error

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7382	29570

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

10.5 7383, HpfDsl: Internal error

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7383	29571

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

10.6 7384, HpfDsl: Cyclic monitoring error

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7384	29572

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

10.7 7385, HpfDsl: Encoder file processing

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7385	29573

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

10.8 7386, HpfDsl: Found no encoder (No link to an encoder)!

The HpfDSL master indicates no communication link to an encoder (motor feedback system).

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7386	29574

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
No physical encoder connection.	Check and fix the encoder connection.

10.9 7387, HpfDsl: The encoder doesn't meet the specified policies

The encoder doesn't meet the specified policies. See objects 'encoder policies' and 'encoder info'.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7387	29575

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
No physical encoder connection.	Check and fix the encoder connection.

10.10 FFFF, Internal Error

Internal Error

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
FFFF	65535

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

11 Diagmessages of module EnDat 2.2 rotary

11.1 7320, EnDat2.2: Encoder error (position invalid), Id=0x %X, Arg=0x%X

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7320	29472

Class	Type
Error	Feedback error

Standard Reaction	Reset
Shorted coils brake	Execute Reset-Command (Fault reset).

11.2 7380, EnDat2

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7380	29568

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

11.3 7381, EnDat2

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7381	29569

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

11.4 7382, EnDat2

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7382	29570

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

11.5 7383, EnDat2

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7383	29571

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

11.6 7384, EnDat2

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7384	29572

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

11.7 7385, EnDat2

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7385	29573

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

11.8 7386, EnDat2.2: Encoder policy check (steps per revolution) failed, Enc=%u, PolicyValue=%u

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7386	29574

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

11.9 7387, EnDat2.2: Encoder policy check (distinguishable revolutions) failed, Enc=%u, PolicyValue=%u

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7387	29575

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

11.10 7388, EnDat2.2: Encoder policy check (step length) failed, Enc=0x%X%x, PolicyValue=0x%X%X

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7388	29576

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

11.11 7389, EnDat2.2: Encoder policy check (measuring length) failed, Enc=0x%X%x, PolicyValue=0x%X%X

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7389	29577

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

11.12 738A, EnDat2

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
738A	29578

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Extended Reset-Command (Fault reset with 'Unlock extended fault reset' Parameter).

11.13 738F, EnDat2

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
738F	29583

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
A mapping Parameter is not supported of this Device.	Please check, your mapping Configuration.

11.14 FFFF, Internal Error

Internal Error

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
FFFF	65535

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

12 Diagmessages of module EnDat 2.2 linear

12.1 7320, EnDat2.2: Encoder error (position invalid), Id=0x %X, Arg=0x%X

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7320	29472

Class	Type
Error	Feedback error

Standard Reaction	Reset
Shorted coils brake	Execute Reset-Command (Fault reset).

12.2 7380, EnDat2

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7380	29568

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

12.3 7381, EnDat2

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7381	29569

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

12.4 7382, EnDat2

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7382	29570

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

12.5 7383, EnDat2

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7383	29571

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

12.6 7384, EnDat2

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7384	29572

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

12.7 7385, EnDat2

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7385	29573

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

12.8 7386, EnDat2.2: Encoder policy check (steps per revolution) failed, Enc=%u, PolicyValue=%u

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7386	29574

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

12.9 7387, EnDat2.2: Encoder policy check (distinguishable revolutions) failed, Enc=%u, PolicyValue=%u

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7387	29575

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

12.10 7388, EnDat2.2: Encoder policy check (step length) failed, Enc=0x%X%x, PolicyValue=0x%X%X

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7388	29576

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

12.11 7389, EnDat2.2: Encoder policy check (measuring length) failed, Enc=0x%X%x, PolicyValue=0x%X%X

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7389	29577

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

12.12 738A, EnDat2

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
738A	29578

Class	Type
Error	Feedback error

Standard Reaction	Reset
Closed loop ramp	Execute Extended Reset-Command (Fault reset with 'Unlock extended fault reset' Parameter).

12.13 738F, EnDat2

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
738F	29583

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

Possible Causes	Solutions
A mapping Parameter is not supported of this Device.	Please check, your mapping Configuration.

12.14 FFFF, Internal Error

Internal Error

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
FFFF	65535

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

13 Diagmessages of module SyncServoMotor

13.1 6320, Parameter error in Object 0x%x/%x

The mentioned parameter contains a not accepted value.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
6320	25376

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Something is wrong with the parameters in this object.	Please check the parameters of the mentioned object.

13.2 6387, Parameter Motor

The configured DCLink Max Voltage is higher then the Motor Max Voltage.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
6387	25479

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Something is wrong with the parameters in this object.	Please check the parameters of the mentioned object.

13.3 638A, The Axis seems not to be parameterized.

No motor was parameterized for this axis

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
638A	25482

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The Object 'Motor parameters/Configured motor type' was not set.	Write your motor type into 'Motor parameters/ Configured motor type'.

13.4 638B, Parameter Torque Current curve: Unable to calculate Torque Current curve.

The characteristic is not monotonically increasing or not in the right working range.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
638B	25483

Class	Type
Error	Error

Standard Reaction	Reset
Shorted coils brake	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The characteristic is not monotonically increasing or not in the right working range.	Check the configured motor and the torque current curve.

13.5 638C, Motor type does not match

The parameterized motor type is not valid

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
638C	25484

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Something is wrong with the parameters in this object.	Please check the parameters of the mentioned object.

13.6 638D, Connected Motor is compatible to the configured Motor

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
638D	25485

Class	Type
Info	Information

Standard Reaction	Reset
No	Information: No reset required.

13.7 638E, The Motor brake is automatically unlocked

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
638E	25486

Class	Type
Info	Information

Standard Reaction	Reset
No	Information: No reset required.

13.8 7122, Motor error or commutation malfunction

Motor error or commutation malfunction

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7122	28962

Class	Type
Error	Commutation error

Standard Reaction	Reset
Shorted coils brake	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The velocity actual value (0x606C) and the actual value of Uq (0x3242/0xF) have a different sign and raised above the configured thresholds.	Check the Motor commutation monitoring parameters (0x32C6)

13.9 7181, Motor thermal utilization has reached the warning level

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7181	29057

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

13.10 7182, Motor thermal utilization has left the warning level

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7182	29058

Class	Type
Info	Information

Standard Reaction	Reset
No	Information: No reset required.

13.11 7183, Motor thermal utilization has reached the Error Level

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7183	29059

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

13.12 7184, Motor overload shut down

The thermal motor model has detected an overload and turned off

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7184	29060

Class	Type
Error	Motor overload shut down

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The thermal motor model has detected an overload and turned off	Reduced the motor load.

13.13 7185, Motor overtemperature shut down

The thermal sensor of the motor has detected an overtemperature and turned off

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7185	29061

Class	Type
Error	Motor overtemperature shut down

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The thermal sensor of the motor has detected an overtemperature and turned off	Reduced the motor temperature.

13.14 7188, Motor overtemperature warning

The motor temperature has reached the warning level.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7188	29064

Class	Type
Warning	Information

Standard Reaction	Reset
No	Information: No reset required.

Possible Causes	Solutions
The motor temperature has reached the warning level.	Reduced the motor temperature.

13.15 FFFF, Internal Error

Internal Error

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
FFFF	65535

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

14 Diagmessages of module LinearMotor

14.1 6320, Parameter error in Object 0x%x/%x

The mentioned parameter contains a not accepted value.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
6320	25376

Class	Type
Error	Error

Standard Reaction	Reset
Axis is inoperable	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Something is wrong with the parameters in this object.	Please check the parameters of the mentioned object.

14.2 6387, Parameter Motor

The configured DCLink Max Voltage is higher then the Motor Max Voltage.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
6387	25479

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Something is wrong with the parameters in this object.	Please check the parameters of the mentioned object.

14.3 638A, The Axis seems not to be parameterized.

No motor was parameterized for this axis

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
638A	25482

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The Object 'Motor parameters/Configured motor type' was not set.	Write your motor type into 'Motor parameters/ Configured motor type'.

14.4 638B, Parameter Torque Current curve: Unable to calculate Torque Current curve.

The characteristic is not monotonically increasing or not in the right working range.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
638B	25483

Class	Type
Error	Error

Standard Reaction	Reset
Shorted coils brake	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The characteristic is not monotonically increasing or not in the right working range.	Check the configured motor and the torque current curve.

14.5 638C, Motor type does not match

The parameterized motor type is not valid

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
638C	25484

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
Something is wrong with the parameters in this object.	Please check the parameters of the mentioned object.

14.6 638D, Connected Motor is compatible to the configured Motor

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
638D	25485

Class	Type
Info	Information

Standard Reaction	Reset
No	Information: No reset required.

14.7 638E, The Motor brake is automatically unlocked

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
638E	25486

Class	Type
Info	Information

Standard Reaction	Reset
No	Information: No reset required.

14.8 7122, Motor error or commutation malfunction

Motor error or commutation malfunction

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7122	28962

Class	Type
Error	Commutation error

Standard Reaction	Reset
Shorted coils brake	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The velocity actual value (0x606C) and the actual value of Uq (0x3242/0xF) have a different sign and raised above the configured thresholds.	Check the Motor commutation monitoring parameters (0x32C6)

14.9 7181, Motor thermal utilization has reached the warning level

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7181	29057

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

14.10 7182, Motor thermal utilization has left the warning level

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7182	29058

Class	Type
Info	Information

Standard Reaction	Reset
No	Information: No reset required.

14.11 7183, Motor thermal utilization has reached the Error Level

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7183	29059

Class	Type
Warning	Warning

Standard Reaction	Reset
No	Warning: No reset required.

14.12 7184, Motor overload shut down

The thermal motor model has detected an overload and turned off

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7184	29060

Class	Type
Error	Motor overload shut down

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The thermal motor model has detected an overload and turned off	Reduced the motor load.

14.13 7185, Motor overtemperature shut down

The thermal sensor of the motor has detected an overtemperature and turned off

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7185	29061

Class	Type
Error	Motor overtemperature shut down

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
The thermal sensor of the motor has detected an overtemperature and turned off	Reduced the motor temperature.

14.14 7188, Motor overtemperature warning

The motor temperature has reached the warning level.

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
7188	29064

Class	Type
Warning	Information

Standard Reaction	Reset
No	Information: No reset required.

Possible Causes	Solutions
The motor temperature has reached the warning level.	Reduced the motor temperature.

14.15 FFFF, Internal Error

Internal Error

Diagnostic Code (Hex.)	Diagnostic Code (Dez.)
FFFF	65535

Class	Type
Error	Error

Standard Reaction	Reset
Closed loop ramp	Execute Reset-Command (Fault reset).

Possible Causes	Solutions
An unknown hard- or software error has occurred.	Disconnect the power supply module from the mains (including the 24 V power supply) and start a new attempt. If this error occurs repeatedly, please call the Beckhoff support that is responsible for you.

15 Diagmessages of module AxisDebug

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